#### **AMBIO**

## **Electronic Supplementary Material**

Maritime Transport in the Gulf of Bothnia 2030

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Appendix S1.

## THEME I: Environment and physical conditions

This section contained four theses about the key factors. The theses were 1) ice conditions get easier by 2030, 2) Northern sea route (North-east passage) opens for commercial shipping by 2030, 3) Sulphur emission control area (SECA) will have either a major or minor effect on shipping by 2030 (multiple choice), 4) Nitrogen emission control area (NECA) will not decrease shipping by 2030.

#### THEME 2: Innovations and industries

There were four theses in this section: 5) The production of novel forestry products, such as biofuels will be increased significantly by 2030, 6) Until 2013, imports of raw wood to Finland and Sweden are likely to A)Increase B) Decrease C) Stay on same level as for now, 7) Northern mining products transport will increase significantly by 2030 and the products will be mainly transported through A) GoB, B) Barents Sea via new railroads: Export ports Narvik, Skibotten and/or Murmansk, C) Swedish products through Barents Sea, Finnish products through GoB ports. 8) Carbon dioxide capture increases shipping in GoB by 2030.

## THEME 3: Logistics and Transport corridors

There were six theses in this section: 9) Mid-Nordic corridor enhances cross-Bothnian transport opportunities and increases the East-West direction traffic, 10) Bothnian corridor enhances the North-South connections on both shores of the GoB and increases intermodal transports in the ports, 11) Transit traffic increases the traffic in the GoB by 2030, 12) Murmansk Port increases the traffic in GoB by 2030 13) Transport will centralize in fewer and large ports in GoB by 2030 14) New railroad connections will be built to Northern Finland and Sweden.

### **THEME 4: Economics**

In the Economics-section, the panellists were asked to 15) choose the probable average annual growth of GDP by 2030 from the following options: A) 1.5% or less in Finland and Sweden B) 1.6% in Finland, 1.8% in Sweden, C) 1.9% in Finland, 2.2% in Sweden or D) 2.4% or more in Finland and Sweden. There were also three other theses in this section: 16) Fairway fees in Finland and Sweden will rise substantially by

2030, 17) Railway fees will rise significantly by 2030, 18) Raw materials prices will increase substantially by 2030.

# THEME 5: Conclusion on key factors and cargo volumes

In addition to the 18 theses or questions mentioned above, there was a concluding part where the panellists were asked to mention the three most important key factors of the ones listed above, or write if there are some other important factors that were not mentioned. The last question handled the cargo volume scenarios of part I.